



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,564	08/27/2003	Messay Amerga	020673	8247

23696 7590 12/03/2007
QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER

SAFAIPOUR, BOBBAK

ART UNIT	PAPER NUMBER
----------	--------------

2618

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/03/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
kascanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary

Application No.

10/650,564

Applicant(s)

AMERGA, MESSAY

Examiner

Bobbak Safaipour

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Action is in response to Applicant's response filed on 9/11/2007. **Claims 1-21** are still pending in the present application. **This action is made FINAL.**

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

In the present application, Applicant essentially argues that Steudle fails teach a frequency controller for suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted, as claimed in the independent claims.

The Examiner respectfully disagrees. Steudle discloses a connection frame number that defines the frame into whose time-slot(s) a gap (read as frequency switch blocking signal) is left for measuring inter-frequency parameters. A transmission gap (read as frequency switch blocking signal) starting slot number (TGSN) defines the time-slot of the 15 time-slots in the frame in question, from which the gap starts. Transmission gap length $1/2$ (TGL $1/2$) defines how long the gap is as a number of time-slots, in other words, it defines the length of time during which transmission is interrupted at one time (read as suppressing the generation of frequency switch commands). Transmission gap distance (TGD) is the distance between two consecutive gaps indicated as a number of time-slots. Transmission gap pattern length {fraction ($1/2$)} (TGPL $1/2$) defines the number of consecutive frames which comprise one or two gaps. Sequences of transmission gap pattern lengths are repeated until the required measurement has been made. The total time of measurement is defined as a transmission gap period repetition

count (TGPRC), which is indicated as a number of frames and typically comprises several gap patterns. (figure 3; col. 3, lines 44 to 67)

The performance of the measurements is typically defined by means of the parameters TGL1/2, TGPL1/2, TGD and TGPRC. The parameters CFN and TGSN are used in some measurements to only define the delay to be used, which is typically a measurement pattern-specific constant value for all mobile stations. For inter-frequency handover of a WCDMA system, the fixed network UTRAN requests user equipment UE to perform inter-frequency parameter measurements. The fixed network UTRAN then signals to the user equipment UE monitoring settings for the handover and the compressed mode parameters to be used for the required measurements. (figure 3; col. 4, lines 1-20)

As a result, the argued features are written such that they read upon the cited references; therefore, the previous rejection still applies.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Amerga et al (hereinafter "Amerga"; US 2003/0231605)** in view of **Steudle (US 6,810,019 B2)**.

Consider **claim 1**, Amerga discloses an apparatus, comprising: a search scheduler for scheduling a search and for generating a frequency switch blocking signal (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose a frequency controller for generating frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted.

In related art, Steudle discloses a frequency controller for generating frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted. (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 13**, Amerga discloses a first Integrated Circuit (IC), responsive to a frequency switch signal generated in a second IC, the second IC comprising: a search scheduler

for scheduling a search and for generating a frequency switch blocking signal (abstract; figures 2, 4-9; paragraphs 36-39); and a first IC comprising: a frequency synthesizer to receive the frequency switch signal from the second IC and to generate an output signal, the frequency of the output signal changing from a first frequency to a second frequency in response to the frequency switch signal (paragraphs 30-39).

Amerga fails to disclose a frequency controller for generating a frequency switch signal comprising frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted.

In related art, Steudle discloses a frequency controller for generating a frequency switch signal comprising frequency switch commands, receiving the frequency switch blocking signal, and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted. (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 14**, Amerga discloses a wireless communication device, comprising: a processor for scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose generating a frequency switch blocking signal; generating frequency switch commands; and

suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted.

In related art, Steudle discloses generating a frequency switch blocking signal; generating frequency switch commands; and suppressing the generation of frequency switch commands when the frequency switch blocking signal is asserted. (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 17**, Amerga discloses a method of searching in the presence of frequency gaps, comprising: scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose suppressing frequency switches during the scheduled search.

In related art, Steudle discloses suppressing frequency switches during the scheduled search (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 20**, Amerga discloses an apparatus, comprising: means for scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose means for suppressing frequency switches during the scheduled search.

In related art, Steudle discloses means for suppressing frequency switches during the scheduled search (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 21**, Amerga discloses processor readable media encoded with software operable to perform the following steps: scheduling a search (abstract; figures 2, 4-9; paragraphs 36-39), but fails to disclose suppressing frequency switches during the scheduled search.

In related art, Steudle discloses suppressing frequency switches during the scheduled search (figure 3; abstract; col. 5, lines 44 to col. 6, line 19; A gap is left for measuring inter-frequency parameters.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Steudle into the teachings of Amerga by optimizing the distribution of the measurement gaps between various mobile stations, the interference caused by mobile stations to each other at a higher transmission is reduced.

Consider **claim 2**, and as applied to **claim 1 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein a gap manager for indicating when a frequency switch is to occur, and wherein the search scheduler schedules the search during a period of time without a frequency switch as indicated by the gap manager. (Steudle: figure 3; abstract; col. 5, lines 44 to col. 6, line 19)

Consider **claim 3**, and as applied to **claim 1 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler comprises a timer, the expiration of which indicates a search is to be scheduled. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 4**, and as applied to **claim 3 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a search without asserting the frequency switch blocking signal prior to the timer expiration. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 5**, and as applied to **claim 3 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the timer resets upon the completion of a scheduled search. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39; performing searches at new frequencies)

Consider **claim 6**, and as applied to **claim 3 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a search and asserts the

frequency switch blocking signal subsequent to the timer expiration. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 7**, and **as applied to claim 1 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler asserts the frequency switch blocking signal during the scheduled search. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 8**, and **as applied to claim 2 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a plurality of search types. (abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 9**, and **as applied to claim 81 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules one or more of the plurality of search types (Amerga: abstract; figures 2, 4-9; paragraphs 36-39) in response to the frequency switch indicator received from the gap manager. (Steudle: figure 3; abstract; col. 5, lines 44 to col. 6, line 19)

Consider **claim 10**, and **as applied to claim 8 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler comprises a plurality of timers corresponding to one or more of the plurality of search types, the expiration of each timer indicating a search of the respective search type is to be scheduled. (abstract; figures 2, 4-9;

paragraphs 36-39)

Consider **claim 11**, and **as applied to claim 10 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the search scheduler schedules a search corresponding to one of the plurality of search types and asserts the frequency switch blocking signal subsequent to the respective timer expiration. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 12**, and **as applied to claim 8 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein the plurality of search types comprises one or more of a list search, a W-CDMA step one search, or a W-CDMA step two search (Amerga: abstract)

Consider **claim 15**, and **as applied to claim 14 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein frequency synthesizer to receive the frequency switch commands and to generate an output signal, the frequency of the output signal changing from a first frequency to a second frequency in response to the frequency switch commands. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 16**, and **as applied to claim 14 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein a searcher for searching in accordance with the scheduled search and for indicating to the search scheduler when the scheduled search is complete. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 18**, and **as applied to claim 17 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein determining future frequency switches; and wherein the search is scheduled during a time period in which no future frequency switches are determined. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Consider **claim 19**, and **as applied to claim 18 above**, Amerga, as modified by Steudle, discloses the claimed invention wherein timing the duration between searches; and scheduling searches without suppressing frequency switches prior to the timed duration reaching a pre-determined maximum. (Amerga: abstract; figures 2, 4-9; paragraphs 36-39)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Application/Control Number:
10/650,564
Art Unit: 2618

Page 12

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lana Le can be reached on (571) 272-7891. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.


Application/Control Number:
10/650,564
Art Unit: 2618

Page 13

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.


Bobbak Safaipoor
B.S./bs

November 24, 2007


11-26-07
LANA LE
PRIMARY EXAMINER